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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/802,837

03/18/2004

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EXAMINER

LAZORCIK, JASON L

ART UNIT

PAPER NUMBER

1791

MAIL DATE

DELIVERY MODE

03/18/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/802,837	Applicant(s) IGUCHI ET AL.	
	Examiner JASON L. LAZORCIK	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 and 17-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 and 17-26 is/are rejected.
- 7) ☒ Claim(s) 19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>07/27/2007</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

The information disclosure statement filed July 27, 2007 fails to comply with 37 CFR 1.98(a)(1), which requires the following: (1) a list of all patents, publications, applications, or other information submitted for consideration by the Office; (2) U.S. patents and U.S. patent application publications listed in a section separately from citations of other documents; (3) the application number of the application in which the information disclosure statement is being submitted on each page of the list; (4) a column that provides a blank space next to each document to be considered, for the examiner's initials; and (5) a heading that clearly indicates that the list is an information disclosure statement. The information disclosure statement has been placed in the application file, but the information referred to therein has not been considered.

Claim Objections

Claim 19 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Specifically, **Claims 19** sets forth an intended use for the product of the claimed manufacturing method. The instant claim appears to provide substantially no further patentable limitations upon the claimed manufacturing method, and Applicant is therefore requested to cancel or amend the claims.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-15 and 17-26 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 1-3, 5-7, 14, 15, 20, and 22-26 recites the limitation "the glass" in the statement "forming the glass preform by moving at least one glass preform forming member while cooling the glass to form a solid glass preform". The Examiner has been unable to trace support for more than one glass preform forming member as is encompassed in the present claim construction wherein Applicant claims "at least one glass preform forming member".

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-15 and 17-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim s 1-3, 5-7, 14, 15, 20, and 22-26 recites the limitation "the glass" in the statement "forming the glass preform by moving at least one glass preform forming member while cooling the glass to form a solid glass preform". There is insufficient antecedent basis for this limitation in the claim.

Further with respect to independent Claims 1-3, 5-7, 14, 15, 20, and 22-26, Applicant is advised that the instant claims appear to lack a nexus between the step of transferring the separated glass gob and the step of forming the glass preform. In accordance with the claim language, it is not evident to the Examiner that the glass gob and glass preform are in any way related to the same piece of glass as is suggested by Applicants disclosure. It follows that the precise metes and bounds for which Applicant seeks patent protection are rendered unclear and indefinite.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

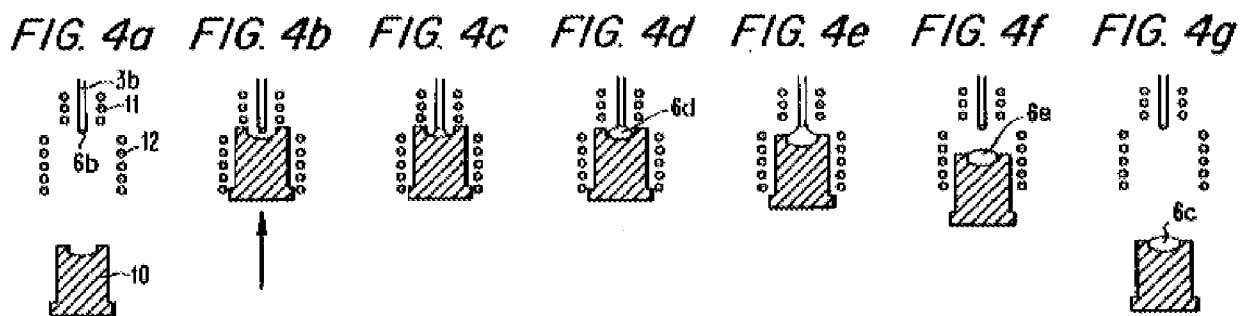
1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-7, 11-15, and 17-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Howard (US 1,853,002) in view of Ikeuchi (US 5,738,701) and Yoshikuni (US 2003/0000252 A1). Since the Yoshikuni pre-grant publication has a publication date more than 12 months prior to Applicants filing date, said publication is properly applied under 35 U.S.C. 103(a) as prior art even though both the reference and the instant application share a common assignment to Hoya Corporation.

As a preliminary note in response to Applicants recently submitted claim amendments, Applicant is advised that the method of press molding a glass preform into final form is understood to be acknowledged by Applicant as old and well known in the art. Specifically, Applicant's specification (§[0002]) states in part that "the method of heat softening a glass article ... known as a preform, and press molding it in a pressing mold is widely employed". It is therefore understood by the Examiner that Applicants invention is directed towards the fabrication of the preform and not per se to the subsequent reshaping or press molding of the preform to final form which Applicant appears to acknowledge as admitted prior art. It follows that the limitations in independent **claims 14, 15, 20, and 22-26** which recite steps of heat softening a glass preform and press molding said heat softened glass preform would be recognized as old and well known to one of ordinary skill in the art at the time of the invention.

With particular respect to **Claims 1, 2, 3, 5, 6, 7, and 15**, the Ikeuchi reference discloses a method for separating glass gobs which teaches nearly every element of the glass gob formation as set forth in Applicants claimed invention (see Figure 4 excerpt below). Specifically, the method comprises moving a support member to approach the front end of the nozzle (3b) (Figures 4a – 4b) and receiving a glass melt flow from a nozzle (3a or 3b) onto a support (10) (figure 4c). As set forth in the disclosure, the support is either intermittently or continuously lowered (fig 4d-4f) and when the glass retention ends, the support member is lowered at high speed to cut the glass (Fig 4g). During the lowering, a constriction is formed between the support and the nozzle (fig. 4e) which yields the breakpoint during the rapid lowering stage of the support (element 6d displayed in greater detail in figure 8).



With respect to **Claims 15 and 17**, it is asserted that from the time the gob is severed from the melt (fig 4g) through the reengagement of the support member to said melt (fig 4c) “contact between the support member and the lower end of the glass melt is “temporarily broken”. Further with respect to **Claim 17**, Ikeuchi clearly indicates that the glass glob that has dripped is rendered spherical on the support member (column 4, lines 23-33). Now, the reference teaches that “The temperature of the crucible...is

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maintained at a predetermined temperature...(and) The temperature of the crucible and nozzle may be set in accordance with the characteristics of the glass and the size of the glass gob to be obtained insofar as the temperature is outside of the liquid phase temperature range (Column 3, lines 9-15).

Although not explicitly disclosed in the Ikeuchi reference, it is the Examiners position that Applicants limitation set forth in **Claim 15** wherein “the support member is cooled by circulation of a coolant through the support member” is a merely trivial extension over the teachings set forth by Ikeuchi. Specifically, Ikeuchi teaches that it is important to maintain both the crucible and nozzle at predetermined temperatures dependent upon the desired gob size and character of the glass melt material. Further, the glass manufacturing arts provide a wealth of exemplary systems [See Yoshikuni (US 2003/0000252), Fig. 3 and Column 7, lines 17-35]] that incorporate a circulated fluid or gaseous flow to regulate the machine temperature profile. Although Ikeuchi may not explicitly point to a method of thermal regulation which makes use of the claimed coolant circulation, it is the Examiners position that such a modification would have been a readily evident alternative to one of ordinary skill in the art at the time of the invention who was seeking to maintain the crucible “at a predetermined temperature” as taught in the instant reference.

Now with respect to each of the independent **Claims 1, 2, 3, 5, and 15**, Ikeuchi states that the instant method provides “defectless non-abrasive glass gobs” (Column 1, lines 45-47) and continues by stating that “The thus obtained glass gob, after cooling

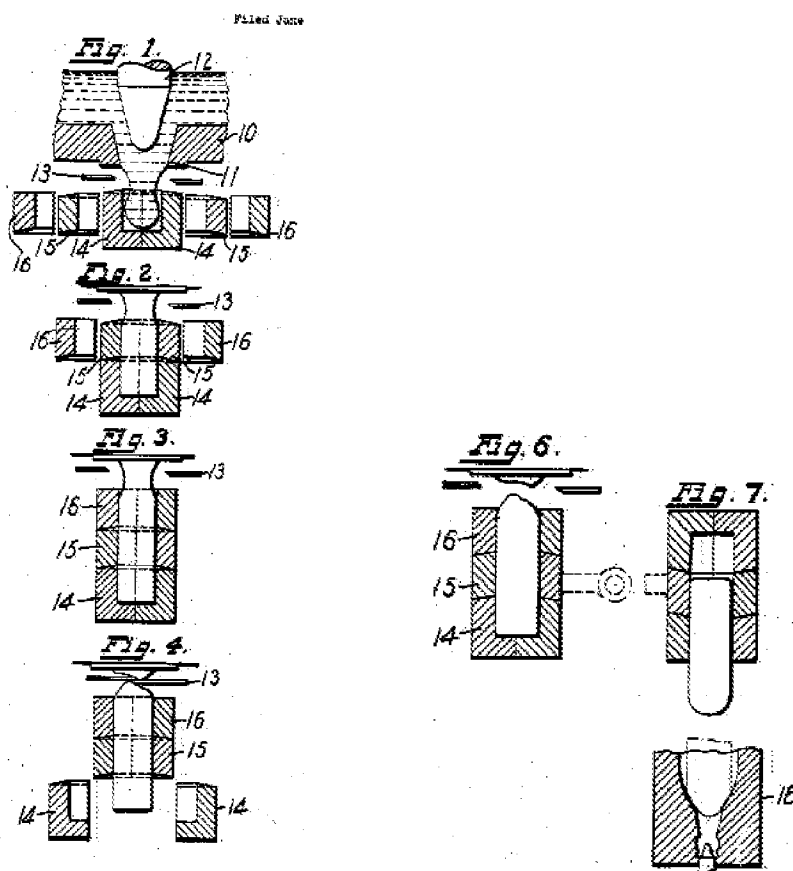
solidification may be press molded in a mold" (Column 5, lines 48-51). Since the glass gob is formed in "the support member" and subsequently shaped in "a mold" the Ikeuchi strongly implies a transferring step from said support member to said mold (e.g. glass forming member"). Ikeuchi however does not explicitly limit the details of this transfer step nor the timing of said transfer with respect to the forming step.

Howard (US 1,853,002) teaches the method of "suspended charge feeding" wherein a glass stream flowing continuously from a nozzle (11) is first discharged to a "supporting member" (14, 15, 16) followed by a concerted transfer step of the entire charge of glass material to a mold (18). As depicted in one preferred embodiment below in figures 6 to 7, the charge is inverted during the transfer process [**Claim 11**]. This "well known method" (Pg 1, lines 45-59) serves a materially equivalent purpose to the "support member" disclosed in the Ikeuchi process, namely to provide a glass gob free from the defects and distortions associated with direct feeding of the molten stream into a forming member.

The Howard process simply makes explicit the claimed process of transferring the glass gob from the support member (14, 15, 16) to a mold or "forming member" (18) for subsequent shaping into a glass article. The significant difference between the instant process and that of Ikeuchi is the use of sheers (13) to sever the charge from the flowing stream. This shearing operation is asserted by Howard to give rise to a deleterious "batting effect" or distortion which is circumvented by the Ikeuchi process. Therefore it would have been obvious to one of ordinary skill in the art at the time of the

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invention to combine the glass gob forming process taught by Ikeuchi in the glass forming operation taught by Howard. This would have been an obvious modification for one of ordinary skill seeking to avoid the "batting effect" caused by shearing operation of Howard.



The prior art of record teaches the claimed glass gob formation and transfer steps as claimed, however provide no explicit limitation upon the relative timing of the transfer process with respect to the duration of the gob formation process. Although the prior art may not provide an explicit limitation upon the process timing, it is accepted as

a common goal of engineering practice to optimize product throughput in order to maximize process economics.

Alternately, Yoshikuni (US 2003/0000252) teaches that “the cast glass is subject to acceleration” during transfer of a gob to a receiving or “forming” mold in a process similar to that outlined by the Applicant. The reference further teaches (Fig. 3 and Column 7, lines 17-35) that it is known to support the glass gobs on a gas film emitted through ports in the supporting surface [**Claims 12, 15, 21**]. More importantly, the reference indicates that equipment acceleration exerts a force upon the glass, deforming the glass and that “when the amount of deformation is significant, the distortion remains in the glass after it returns it original shape.” Finally, the reference indicates that “the greater the acceleration exerted on the glass...the greater the tendency of the glass to distort” (Column 1, Lines 55-67).

Therefore, it is clear that a balance must be established between 1) high throughput which maximizes units per unit time but which simultaneously subjects the glass gobs to higher distorting forces, and 2) low production speed which minimizes gob distortion forces but compromises product throughput.

“[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation.”; see *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). A particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation

(See *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980) and *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977)). In the instant case, process timing gives rise to a tradeoff between product production rate and the gob distorting forces which decrease product quality. Therefore in the Applicants process, “the time during which the glass forming member is stopped for transfer of the glass gob from the support member” is deemed a result-effective variable of the gob molding process. In view of the foregoing and absent any compelling and substantially unexpected results to the contrary, it is the Examiners express position that one having no more than an ordinary level of skill in the art at the time of the invention would have been fully capable of empirically optimizing relative timing of the process steps.

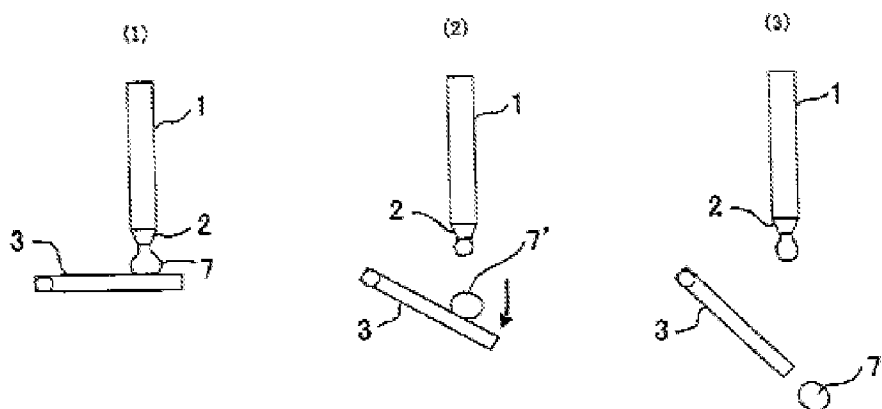
Claims 8, 9, 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Howard (US 1,853,002), Ikeuchi (US 5,738,701), and Yoshikuni (US 2003/0000252 A1) as applied above and further in view of Murakami (US 2003/0131628 A1).

In summary, Ikeuchi teaches method of separating individual glass gobs from a glass melt which is continuously flowing from nozzle. Ikeuchi implicitly requires a transfer step of transferring the formed gob from the support member to a forming member, and the Howard reference renders this transfer explicit and further indicates that this process, generally termed “suspended charge feeding”, is old and well known in the art. Neither of these references specifically limits the process timing, however it is the Examiners position absent, any compelling and unexpected

results, that the claimed process timing would have been achieved through routine empirical optimization. Specifically with reference to the Yoshikuni disclosure, it would have been obvious to one of ordinary skill to seek a balance between maximizing gob production rate while minimizing the distorting forces imparted to the softened glass gobs which result in decreased product quality.

Now claims 8, 9, 10 all relate to various permutations of the general design and operation of the support member. While the cited prior art is silent regarding these specific limitations, Murakami (US 2003/0131628 A1) teaches a variety of support members which read directly upon the claimed structure. With reference to the excerpt figure 2 below, the instant reference teaches a support member which is tilted to cause the glass gob to fall off.

FIG.2



Figures 3 and 4 teach support members which are rotated 360° to transfer a glass gob and wherein two consecutively produced glass gobs are received on two different surfaces of the support member.

FIG.3

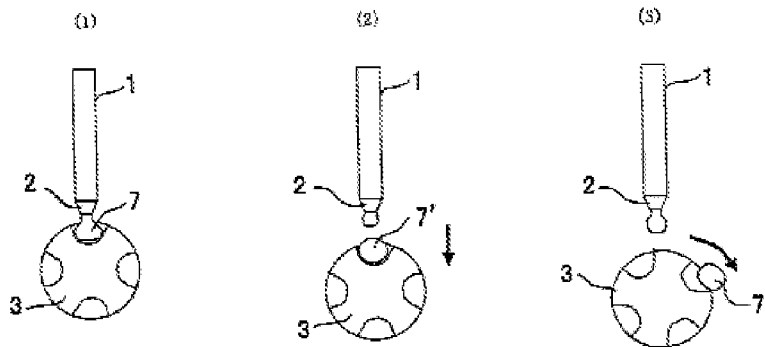
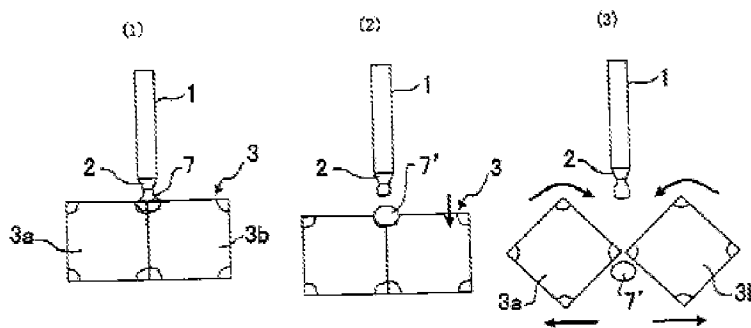


FIG.4



It would have been presented a merely obvious extension over the prior art teachings to substitute one or more of the functionally equivalent support members taught by the Murakami reference in place of the Ikeuchi support member.

Response to Arguments

Applicant first presents a series of arguments directed individually against the Ikeuchi, Howard, and Yoshikuni references. Applicant is reminded that the contested rejection is based upon the combination of references under 35 U.S.C. §103(a).

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Therefore in collective response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant Next asserts that a parison mold is not suitable for use as a glass preform forming member, and thereby concludes that "there would be no basis for one skilled in the art to even consider the combination of Howard and Ikeuchi". Specifically, Applicant argues that the article prepared with the supporting members in Howard is a parison or preform. Applicant next asserts that since Ikeuchi produces a glass gob and Howard produces a parison or preform, then a combination of the prior art teachings is necessarily excluded.

The Examiner strongly disagrees with the basis for Applicants argument.

Specifically, it would appear that Applicant here purports a distinction between the glass gob Ikeuchi and the parison disclosed by Howard, however Applicant provides no further evidence or justification to support such a distinction. In fact, both the glass gob and parison would be conventionally recognized as discrete masses of heat softened glass. In short, the Examiner is hard pressed to discern any substantive distinction between the two.

This point notwithstanding, Applicants alleged distinction, if any exists, certainly does not exclude a combination of the references in the manner set forth by the

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Examiner. As set forth above, Ikeuchi teaches method of separating individual glass gobs from a glass melt which is continuously flowing from a nozzle. Ikeuchi implicitly requires a transfer step of transferring the formed gob from the support member to a forming member. The Howard reference renders this transfer explicit and further indicates that this process, generally termed "suspended charge feeding", is old and well known in the art.

Therefore, in response to applicant's argument that one of ordinary skill would find no rationale to combine the Howard and Ideuchi teachings, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

Finally, Applicant asserts that the time period during which the forming member is stopped for transfer of a glass gob is not a result-effective variable. Specifically, Applicant argues that since a separate support and forming members are used in the production of a glass preform, the rate of preform production is entirely decoupled from the distorting forces experienced by a glass gob. Following this logic, Applicant concludes that the process timing would not be subject to empirical or experimental optimization by one of ordinary skill in the art.

The Examiner is not persuaded.

In response, it is the Examiners position first that Applicant has failed to provide

any evidence to support the allegation that the rate of preform production is independent and entirely decoupled from the forces experienced by the glass gob. Further, Applicants arguments run counter to the nature of the disclosed invention. Specifically, the gob production and gob transfer steps are executed in a sequential and repetitive cycle and collectively the execution of said sequential steps define and limit the rate of production of glass gobs. The Examiner is hard pressed to comprehend Applicants logic alleging independence between the timing of the transfer operation and the rate of gob production. It follows that since Applicant has provided no conclusive evidence in support of the instant allegations, these arguments are held to be mere conjecture and attorney argument. The Official policy regarding Attorney argument is clearly outlined in MPEP §2145 [R-3];

“Attorney argument is not evidence unless it is an admission, in which case, an examiner may use the admission in making a rejection. See MPEP § 2129 and § 2144.03 for a discussion of admissions as prior art. The arguments of counsel cannot take the place of evidence in the record. In re Schulze, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965); In re Geisler, 116 F.3d 1465, 43 USPQ2d 1362 (Fed. Cir. 1997) (“An assertion of what seems to follow from common experience is just attorney argument and not the kind of factual evidence that is required to rebut a prima facie case of obviousness.”). See MPEP § 716.01(c) for examples of attorney statements which are not evidence and which must be supported by an appropriate affidavit or declaration.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON L. LAZORCIK whose telephone number is (571)272-2217. The examiner can normally be reached on Monday through Friday 8:30 am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on (571) 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


/Steven P. Griffin/

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Supervisory Patent Examiner, Art
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	Examiner	Art Unit	
	JASON L. LAZORCIK	1791	